

CLAIMS

What is claimed is:

1. In an integrated circuit, a power management architecture comprising:

5 a power rail to supply power to a plurality of sections of said integrated circuit;

a voltage meter for measuring voltage levels supplied to each of at least two of said plurality of sections; and

10 a first integrated voltage regulator to supply power to said power rail;

wherein an output voltage of said first integrated voltage regulator is controlled based on said measured voltage levels.

2. In an integrated circuit, a power management architecture according to claim 1, further comprising:

a plurality of integrated voltage regulators including said first integrated voltage regulator, each of said plurality of integrated voltage regulators being associated with a different one of said plurality of sections;

20 wherein an output voltage of each of said integrated voltage regulators is controlled based on a voltage level measured at a respective one of said plurality of sections.

3. In an integrated circuit, a power management architecture according to claim 1, further comprising:

a plurality of integrated voltage regulators including said first integrated voltage regulator, each of said plurality of integrated voltage regulators being operable to supply electrical power to said power rail;

30 wherein an output voltage of each of said integrated voltage regulators is controlled based on voltage levels measured at at least one of said plurality of sections.

4. In an integrated circuit, a power management architecture according to claim 3, wherein:

5 said at least one of said plurality of sections at which said voltage level is measured is a section farthest electrically on said power rail from any of said plurality of integrated voltage regulators.

5. In an integrated circuit, a power management architecture comprising:

10 a plurality of power rails to supply power to a respective plurality of sections of said integrated circuit;

 a voltage meter for measuring voltage levels supplied to each of at least two of said plurality of sections; and

15 a plurality of integrated voltage regulators, each to supply power to a respective one of said plurality of power rails;

 wherein an output voltage of each of said plurality of integrated voltage regulators is controlled based on said measured voltage levels.

20 6. In an integrated circuit, a power management architecture according to claim 5, further comprising:

 a processor to receive an output from said voltage meter and to control said plurality of integrated voltage regulators.

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7. A method of providing secondary internal voltage regulation in an integrated circuit including internal voltage regulation, said method comprising:

5 providing at least one power rail to supply power to a plurality of sections of said integrated circuit;

measuring a level of voltage supplied to each of at least two of said plurality of sections; and

10 regulating a voltage level of power supplied to said at least one power rail, based on a voltage level measured at a supply point to at least one of said plurality of sections of said integrated circuit.

8. The method of providing a secondary internal voltage regulation in an integrated circuit including internal voltage regulation according to claim 7, wherein:

15 at least three separate power rails are provided to supply power to said plurality of sections of said integrated circuit.

20 9. The method of providing a secondary internal voltage regulation in an integrated circuit including internal voltage regulation according to claim 8, further comprising:

measuring a level of voltage supplied to each of said at least three separate power rails.

10. A method of providing secondary internal voltage regulation in an integrated circuit including internal voltage regulation, said method comprising:

5 providing a plurality of power rails to supply power to a respective plurality of sections of said integrated circuit;

measuring a level of voltage supplied to each of at least two of said plurality of sections; and

10 regulating a voltage output from a plurality of integrated voltage regulators, each of said plurality of integrated voltage regulators adapted to supply power to a respective one of said plurality of power rails.

11. The method of providing secondary internal voltage regulation in an integrated circuit including internal voltage regulation according to claim 10, wherein:

15 at least three power rails are provided so supply power to said respective plurality of sections of said integrated circuit.

12. Apparatus for providing secondary internal voltage regulation in an integrated circuit including internal voltage regulation, said apparatus comprising:

20 means for providing a plurality of power rails to supply power to a respective plurality of sections of said integrated circuit;

25 means for measuring a level of voltage supplied to each of at least two of said plurality of sections; and

means for regulating a voltage output from a plurality of integrated voltage regulators, each of said plurality of integrated voltage regulators adapted to supply power to a respective one of said plurality of power rails.

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